



John Lambert, founder and head of Abstract Masonry Restoration, Inc., trains students in mixing mortar for masonry restoration at a hands-on TBSI workshop.



Master carver Jean-Francis Eakle hand-carves a block of Torrey buff sandstone into a birdbath basin. The stone will eventually be placed in the garden of a private residence.



The craftspeople at Historical Arts and Casting handle all phases of metal design and fabrication at their studio in West Jordan. This piece is a portion of a larger gate assembly.

UTAH PRESERVATION TREASURES

By Nelson Knight and Wilson Martin

UTAH BOASTS A WEALTH OF CRAFTSPEOPLE

whose mastery of traditional building techniques is critical to the state's successful historic preservation movement. The excuse "We can't restore it because nobody knows how it was done" doesn't hold water around here.

Among the state's many noteworthy craftspeople are three firms whose contributions to historic preservation make them "treasures" of Utah's preservation trades. These firms vary in their crafts and products, but they share three important traits: all of them complete projects on a national or international scale, all of them have furthered the field of preservation education, and all have cultivated traditional methods of craftsmanship while integrating new approaches and technologies.

Looking through the eyes of craftsmen of the past

Founded in 1986, Abstract Masonry Restoration, Inc. provides historic masonry consulting and contracting services for projects throughout the United States, England, and Wales. The company maintains its corporate headquarters in Salt Lake City and has a branch in Boston.

Abstract Masonry Restoration's craftspeople have stabilized, cleaned, and restored the masonry on numerous notable buildings, including the Ralph Waldo Emerson house in Concord, Massachusetts; the Fox Theatre in Atlanta, Georgia; Robert E. Lee's Civil War headquarters near Lewisburg, West Virginia; and the Union Pacific Depot, McCune Mansion, David Keith Mansion, First Presbyterian Church, St. Mark's Cathedral, and The Holy Trinity Greek Orthodox Cathedral in Salt Lake City.

John Lambert, founder and head of the firm, peppers his conversation with a mix of high-tech terms such as "microinjection" and "siloxane." But he also has a deep appreciation for the principles and techniques developed by earlier generations of masons. "It is only when one sees through the eyes of the

masonry craftsmen of the time that one can develop the reverence for an accurate and respectful preservation or restoration project," he explains.

In his study of these techniques, Lambert has assembled what is thought to be the most comprehensive collection available of historic books, art, and documents on masonry from the early 1700s through the early 1900s. These resources contribute to his understanding of how historic masonry buildings were originally constructed and why masonry craftsmen chose the materials they did.

Like the masons who preceded him, Lambert passes on his knowledge to new generations of craftspeople. He conducts hands-on historic masonry restoration training workshops at the Campbell Center for Historic Preservation Studies in Mt. Carroll, Illinois, and the Traditional Building Skills Institute (TBSI) at Snow College in Ephraim, Utah. He has also served as chairman of the board for TBSI.

Each year, Lambert leads a group of students to England and Wales to study historic masonry buildings and learn traditional skills and restoration techniques. As part of their studies, the students work on ongoing projects at an eleventh-century manor owned by Llewelyn, the last sovereign Prince of Wales.

Lambert counts his firm's work on the St. George Reef Lighthouse as his most challenging. Constructed over ten years from 1882-1892, the lighthouse sits on a small rock island

six miles into the Pacific Ocean off the shore of Crescent City, California. The island is only 17 feet above sea level and affords no safe landing for boats. The only way to access the lighthouse is via helicopter which, weather permitting, lands on the small deck of the lighthouse. Therefore, transportation of manpower and heavy masonry materials is time consuming, dangerous, and expensive.

The dedication and ingenuity Abstract Masonry Restoration brought to bear on the lighthouse project are typical of Lambert's passion for preserving our architectural heritage through the highest standards of his craft. As Lambert explains, "Anyone can repair masonry. We restore it."

The Middle Ages meet the Computer Age

At State Stone's yard in Murray, you can see the best of the old and new in stone carving side by side. In one workshop, master stone carvers Brad Hansen and Jean-Francois Eakle hand carve blocks of Little Cottonwood granite for the Utah State Capitol Building and buff Torrey sandstone for the Salt Lake Tabernacle of the Church of Jesus Christ of Latter-day Saints (LDS Church) and a private residence.

Next door, Jim DeLong operates a computer controlled, diamond saw and lathe to carve other blocks of Little Cottonwood granite into balusters that will line the Capitol's rooftop. The saw, fabricated by a company in Italy, is connected to computer

IT IS OUR HANDS-ON CRAFTSMEN, who while left alone and unobserved, control the quality of both the seen, and the unseen. Ignoring the unseen festers a canker in the soul of the craftsman and robs the building owner of what he is rightfully due. It leaves a scar on our cultural heritage, disrespects the original mason, and does not do justice to the respectful restoration of the masonry. The craftsman who focuses on both the seen, and the unseen is a true craftsman – with integrity.

— JOHN LAMBERT, FOUNDER & PRESIDENT

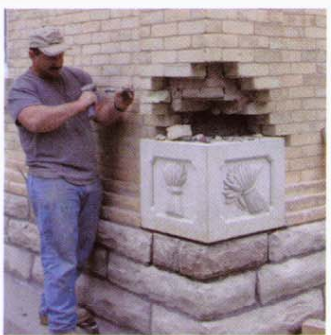
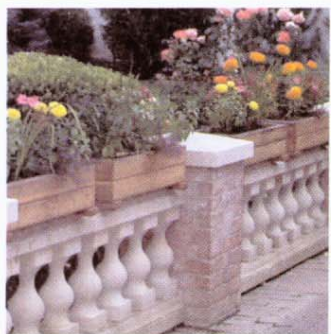


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software and a 3-D scanner that can convert a two-dimensional image or three-dimensional model into a digital tool path for the saw. The saw then uses these codes to cut a piece of stone into any shape imaginable.

In addition to its yard, State Stone owns quarries near Torrey and Manti. Much of the quarry work utilizes methods familiar to the workers who cut stone for cathedrals in the Middle Ages. State Stone also has a slabbing plant in Torrey where large wire and belt saws cut limestone, granite, and Torrey red and buff sandstone from the quarries into more manageable pieces.

State Stone has put this investment in tradition and technology to work on a long list of historic preservation projects. Initially much of this work was in Utah. The firm's early projects included fabricating and installing stone for the St. George Tabernacle and the exterior limestone at the Manti Temple of the LDS Church.

State Stone provided the limestone for the restoration of the Utah Governor's Mansion after a devastating fire in 1993. In a later project, State Stone craftspeople were able to add their own creative touch to the largely restorative work on the mansion. They designed and carved a cartouche commemorating the 2002 Winter Olympic Games for the east side of the mansion's upper story.

More recently the company has broadened its focus to include projects across the country. It was one of several stone firms that prepared stone for the LDS Church's reconstruction of the Nauvoo Temple in Nauvoo, Illinois. State Stone also carved intricate column capitals based on ears of corn for the restoration of the exterior on the North Dakota State Capitol and used Manti limestone from its own quarry to restore the exterior of the Sheraton Palace Hotel (William Ralston's 1875 Palace Hotel) in San Francisco.

Keith MacKay, the owner of State Stone, has been working with stone for 55 years. He shares his knowledge of stone carving techniques with a new generation of craftspeople as a member of the TBSI Board and through teaching TBSI's stone carving workshops. By making historic preservation a major focus of State Stone's business, MacKay has created an oasis where the time-honored skills, technology, and passion required to preserve historic stone buildings thrive.

Reinventing a lost art

The Baird family re-invented a lost art and established a thriving business along the way. Company founder Steven T. Baird was a preservation architect. In the early 1970s, he was asked to direct the restoration of the 1876 cast iron facade of the ZCMI department store in Salt Lake City. Baird discovered that few, if any, people in the country had experience with cast iron construction technology. So Baird oversaw local metal fabricators, pattern makers, and foundry men in the creation of pieces necessary to restore the façade.

News of the project quickly spread through preservation circles around the country and Baird was asked to consult on numerous cast iron projects from New York to California.

Baird's son, David, started organizing the various subcontractors involved in the early projects and assembling some of the components in his parent's garage. Soon the team grew with the addition of Robert and Richard Baird, as well as other associates.

The growing interest in historic preservation and traditionally-inspired new buildings allowed the company to prosper. Now Historical Arts and Casting, Inc. has 60 employees and a 75,000 square foot manufacturing and fabrication facility in West Jordan. A tour of the facility takes a visitor from quiet offices, where the Baird brothers and their creative crew dream up the designs for their metal masterpieces, to the cacophony of the foundry, where the designs are cast in an elaborate sand casting process utilizing sand and molten iron, aluminum, and bronze.

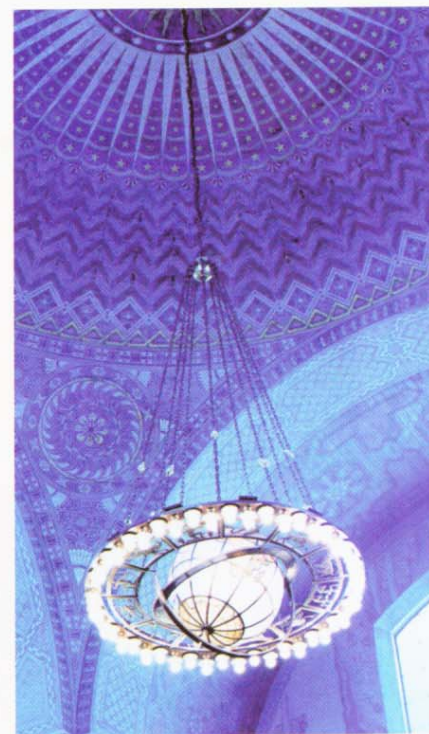
Today Historical Arts and Casting, produces a wide variety of ornamental and architectural metalwork, from cast iron storefronts to decorative grillwork, canopies, doors, windows, statuary, and fountains. It combines traditional foundry processes with computer-aided design and fabrication tools. The firm's highly sought-after work can be



In one of their most challenging projects, Abstract Masonry Restoration craftspeople restored the beautiful, but nearly inaccessible, St. George Reef Lighthouse off the California coast.



State Stone's computer controlled diamond saw will turn this blank of Little Cottonwood granite into a baluster for the Utah State Capitol restoration.



Historical Arts and Casting restored the spectacular Globe Chandelier at the Los Angeles Central Library. Composed of cast bronze, the nine-foot diameter chandelier is a model of the solar system.

found in grand public buildings, ornate churches, historic commercial buildings, and exclusive residences across the county.

To help others learn about this traditional craft, Historical Arts and Casting has republished important and rare books on metalwork, including "MacFarlanes Catalogue of Cast Iron Ornamentation," a 1908 work considered the best and most comprehensive publication on metalwork of its time. The MacFarlane catalog is even available for free online at the firm's website.

One of the firm's specialties is the restoration and reproduction of ornate chandeliers for large public buildings. The restored chandeliers in the Los Angeles Central Library and in the main waiting room of Grand Central Station in New York City show the breadth of Historical Arts & Casting's expertise and skill of its artisans. Another of the firm's many restoration projects involved restoring a series of metal bridges in New York City's Central Park. In Utah, the company recently completed the casting for new light standards, based on a historic design, for the grounds of the Capitol.

The scope, magnitude, and quality of Historical Arts and Casting's projects combined with its pioneering work in reviving the craft of cast iron construction have made the firm a worldwide leader in the design and manufacturing traditional ornamental metalwork.

Preserving traditional skills for the future

The work of Utah's preservation "treasures" has benefited historic buildings in Utah and beyond. And by generously sharing their advice and expertise, these firms have contributed to many more successful projects that don't bear their names. But perhaps most importantly, these firms have helped lay the foundation for the future success of Utah's historic preservation movement by keeping alive the traditional skills of the past and training new artisans for the future.

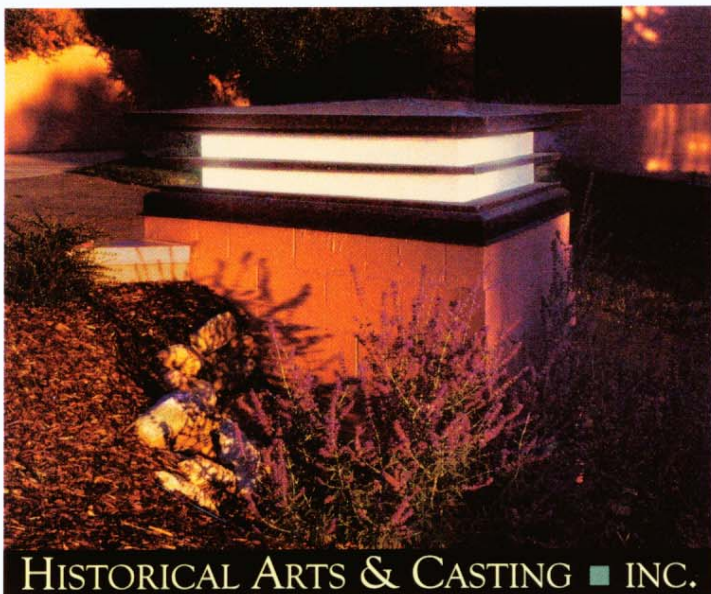
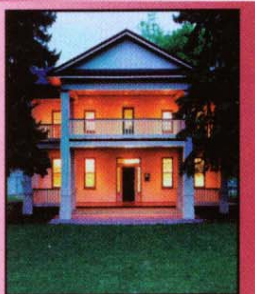
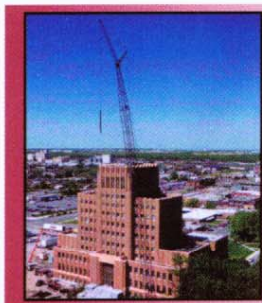
"We are so fortunate to also have these people here in our state," explains Utah Heritage Foundation Interim Executive Director Kirk Huffaker, "because they bring a technical artisan's craft directly to the layperson in classes and workshops on a regular basis. They all have the ability to teach and communicate with regular folks and provide them with excellent skills and a preservation knowledge base that is needed in the state." *

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